NOTES

1. Papers selected for inclusion in General Sessions will be available at the Conference in the following official languages of the United Nations: English, French, Russian and Spanish.

2. Papers selected for inclusion in Specialized Sessions will be available at the Conference in only one of the above official languages.

3. Summaries of all papers, as submitted by contributors, will be available at the Conference in the following official languages of the United Nations: English, French, Russian and Spanish.

4. Papers and summaries will not be available for general distribution in advance of the Conference. They will be published in advance in limited quantities only for the use of delegations of participating governments and of other authorized participants. Post-Conference publication and general distribution of the Conference Proceedings will follow United Nations practices as laid down by the United Nations Publications Board.

BASIC PRINCIPLES IN WEED CONTROL AND THEIR IMPORTANCE IN CROP PRODUCTION

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1. The native or climax vegetation in most geographical areas never has been and still is not an efficient or economical source of food for livestock and humans. In order to feed, clothe, and shelter the world's expanding population, it has been necessary to replace the native vegetation with more efficient plants and to manage them at high productivity levels. The control of weeds is a basic, essential and important factor in crop production practices.

2. Weeds interfere with crop production efficiency and cause yield and quality losses that amount to about 13 percent of the value of the crops. Added to these losses is the cost of control, which averages about 14 percent of the value of the crops produced. It has been estimated that in the United States the annual losses from weeds and the cost of control exceeds 4 billion dollars annually.

3. An understanding of the physiological and biochemical fate of herbicides in plants and soils has resulted in the development of revolutionary concepts of selective chemical weed control. Outstanding progress has been made in developing mechanical, cultural, biological, chemical, and combination methods of controlling weeds in crop and noncrop areas. Combination chemical-cultural methods of weed control are now being used commercially to increase mechanization and production efficiency in rice, sugarcane, small grains, cotton, sweet potatoes, beans, potatoes, and other crops, and on pastures and rangelands.

4. Weeds are a total farm liability and all crops are subject to their competition. Greater research emphasis is being given to the development of overall weed control programs on the farm as a farm unit rather than to an attempt to limit the development of weed control practices to individual crops. Herbicides should be used not only on the current crop but also on all tolerant crops in the rotation. It is a sound principle to rotate different herbicides on the same crop grown continously and to rotate different herbicides on all crops grown in the rotation. This practice prevents undesirable shifts in the weed population, avoids an accumulation of herbicide residues in the soil, and provides for the full use of chemical energy in combination with cultural practices for weed control.

5. Future progress will be determined largely by the discovery of selective, more efficient, safer, and more economical herbicides; an understanding of the effects of chemicals on plant growth and soils; ingenuity in combining chemicals with cultural practices; an understanding of the limitations of current weed control practices; the integration of chemical weed control methods into established crop production practices; the influence of chemical methods on present cultural practices; and the discovery of more efficient sources of energy for weed control.

6. The development of improved chemical weed control practices represents one of the most effective approaches to increased efficiency and lower cost mechanized crop production. The application of these new technological advances will be reflected in increased supplies of food, feed, and fiber products that will help to improve standards of living in the world.

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